Owner's Manual & Safety Instructions

Save This Manual Keep this manual for the safety warnings and precautions, assembly, operating, inspection, maintenance and cleaning procedures. Write the product's serial number in the back of the manual near the assembly diagram (or month and year of purchase if product has no number). Keep this manual and the receipt in a safe and dry place for future reference.

REV 15h

Bunker Hill Security®

Find the most recent manual and software updates at harborfreight.com

8-Channel Surveillance DVR

Visit our website at: http://www.harborfreight.com
Email our technical support at: productsupport@harborfreight.com

ITEM 62463

When unpacking, make sure that the product is intact and undamaged. If any parts are missing or broken, please call 1-888-866-5797 as soon as possible.

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No portion of this manual or any artwork contained herein may be reproduced in any shape or form without the express written consent of Harbor Freight Tools.
Diagrams within this manual may not be drawn proportionally. Due to continuing improvements, actual product may differ slightly from the product described herein. Tools required for assembly and service may not be included.

⚠WARNING

Read this material before using this product. Failure to do so can result in serious injury. SAVE THIS MANUAL.

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WARNING SYMBOLS AND DEFINITIONS	
⚠	This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.
⚠DANGER	Indicates a hazardous situation which, if not avoided, will result in death or serious injury.
⚠WARNING	Indicates a hazardous situation which, if not avoided, could result in death or serious injury.
⚠CAUTION	Indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.
NOTICE CAUTION	Addresses practices not related to personal injury.

IMPORTANT SAFETY INFORMATION

⚠WARNING

Read all safety warnings and instructions.
Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

Save all warnings and instructions for future reference.

Installation Precautions

1. **Check federal, state and local surveillance laws before installing video and/or audio surveillance equipment.**
2. Install only according to these instructions. Improper installation can create hazards.
3. **Do not overreach when installing this product. Keep proper footing and balance at all times.** *This enables better control in unexpected situations.*
4. Wear ANSI-approved safety goggles during installation.
5. Keep installation area clean and well lit.
6. Keep children and bystanders out of the area during installation.
7. Do not install when tired or when under the influence of alcohol, drugs or medication.

Use Precautions

1. This product is not a toy. Do not allow children to play with or near this item.
2. Use as intended only.
3. Do not modify.
4. Maintain product labels and nameplates. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.

Service

Have your DVR equipment serviced by a qualified repair person using only identical replacement parts. *This will ensure that the safety of the equipment is maintained.*

Camera Safety Warnings

1. To prevent electric shock, do not attempt to disassemble Camera. There are no serviceable parts inside.
2. **Do not expose the Power Adapter to rain or wet conditions.** *Water entering the Power Adapter will increase the risk of electric shock.*
3. **Do not abuse the Power Adapter cord. Never use the cord for unplugging the plug from the outlet. Keep cord away from heat, oil, sharp edges or moving parts.** *Damaged or entangled cords increase the risk of electric shock.*
4. Handle Camera with care. Camera could be damaged by improper handling or storage.

DVR Safety Warnings

1. Maintain adequate airflow around DVR.
2. Use supplied Power Adapter only.
3. To prevent electric shock, do not attempt to disassemble DVR. There are no serviceable parts inside.
4. **Do not expose the Power Adapter or DVR console to rain or wet conditions.** *Water entering the Power Adapter or DVR console will increase the risk of electric shock.*
5. **Do not abuse the Power Adapter cord. Never use the cord for unplugging the plug from the outlet. Keep cord away from heat, oil, sharp edges or moving parts.** *Damaged or entangled cords increase the risk of electric shock.*
6. Maintain labels and nameplates on the unit. These carry important safety information. If unreadable or missing, contact Harbor Freight Tools for a replacement.
7. WARNING: The cord of this product contains lead and/or di (2-ethylhexyl) phthalate (DEHP), chemicals known to the State of California to cause cancer, and birth defects or other reproductive harm. Wash hands after handling. (California Health & Safety Code § 25249.5, *et seq.*)
8. The warnings, precautions, and instructions discussed in this instruction manual cannot cover all possible conditions and situations that may occur. It must be understood by the operator that common sense and caution are factors which cannot be built into this product, but must be supplied by the operator.

SAVE THESE INSTRUCTIONS.

Grounding

⚠WARNING

TO PREVENT ELECTRIC SHOCK AND DEATH FROM INCORRECT GROUNDING WIRE CONNECTION:

Check with a qualified electrician if you are in doubt as to whether the outlet is properly grounded. Do not modify the power cord plug provided with the tool. Never remove the grounding prong from the plug. Do not use the tool if the power cord or plug is damaged. If damaged, have it repaired by a service facility before use. If the plug will not fit the outlet, have a proper outlet installed by a qualified electrician.

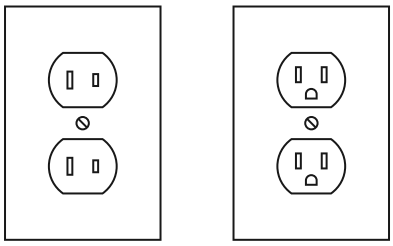


Figure A: Outlets for 2-Prong Plug

1. The included Power Adapters do not require grounding.
2. The Power Adapters may be used in either of the 120 volt outlets shown in the preceding illustration. **(See Figure A.)**

Extension Cords

Note: Do not use an extension cord with the Power Adapters.

Symbology

	Double Insulated
	Canadian Standards Association
	Underwriters Laboratories, Inc.

V	Volts
~	Alternating Current
A	Amperes

Specifications

DVR		
Hard Drive	500 GB	
Video Standard	NTSC (United States, default) / PAL (Europe)	
Video Codec	H.264	
Operating System	Linux	
Video I/O	Input: 8 BNC	
	Output: 1 HDMI / 1 BNC / 1 VGA	
Audio Codec	G.711	
Audio I/O	Input: 2 RCA	
	Output: 1 RCA	
Recording Resolution	16:9 Screen WD1: 960 x 480 WHD1: 960 x 240 WCIF: 480 x 240	4:3 Screen D1: 720 x 480 HD1:720 x 240 CIF: 360 x 240
Recording Mode	Manual / Schedule / Motion Detection	
Motion Detection	Selectable Area and Sensitivity Detection	
PTZ Interface	RS485 - Supports Pelco-D/P camera (sold separately)	
Network Interface	RJ-45 10m/100m Ethernet Interface	
USB Interface	USB 2.0	
DVR Input Rating	12VDC / 2A	
Power Adapter Rating	12VDC / 2A	
Operating Temperature	32º - 131ºF	

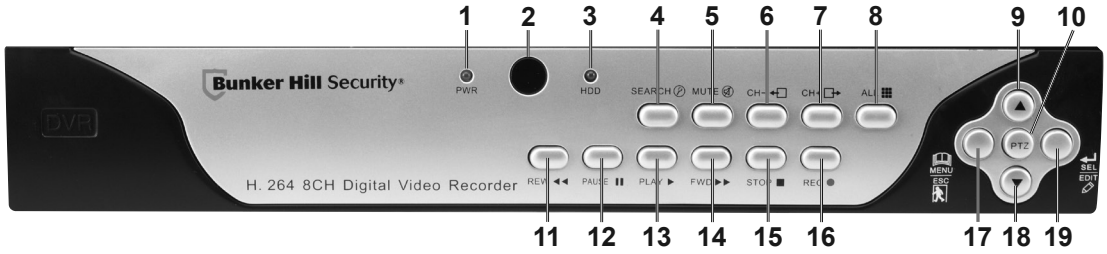
Cameras	
Lens Type	Fixed 6 mm
Horizontal Resolution	550 TVL
Effective Pixels	648H x 488V
Night Vision Type	Infrared LEDs with Low Light Sensor
Image Type	Daylight: Color Infrared: Black & White
Infrared Wavelength	940nm
Infrared Distance	30 ft. (indoors)
Ingress Protection Rating	IP65 - Protected from low pressure water jets
Video Connector	BNC
Camera Input Rating	12VDC / 250 mA
Power Adapter Rating	12VDC / 1A - To power included 4 cameras. **Additional cameras or longer cables will require a higher amperage Power Adapter (all sold separately)**
Cable Length	60 ft.
Operating Temperature	14° - 122°F

Components and Controls

Read the ENTIRE IMPORTANT SAFETY INFORMATION section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

IMPORTANT: If Mouse, Remote, and DVR buttons won't work, press and hold REW button on front of DVR until unit beeps.

DVR Front Panel



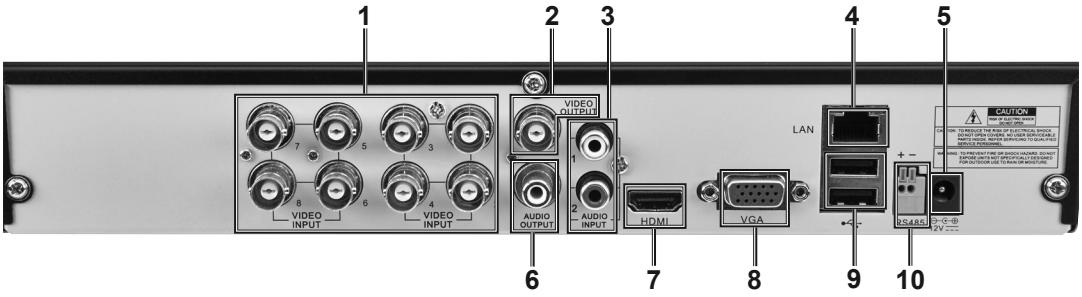
1	Green Power Indicator - glows when power is on
2	Remote Control IR Receiver
3	Red Hard Drive Light - flashes when recording
4	Search Recordings
5	Mute
6	Previous Channel
7	Next Channel
8	Toggle between single, 4 and 8 Screen Displays
9	Menu Up / *PTZ Up**
10	*PTZ Control Mode**

11	Rewind / Lock and Unlock Controls
12	Pause
13	Play
14	Fast Forward
15	Stop
16	Start Manual Recording
17	Open Menu / Escape / *PTZ Left**
18	Menu Down / *PTZ Down**
19	Confirm Selection / Edit Selected Setting / *PTZ Right**

*Controls for PTZ mode are *italicized*. PTZ is optional Pan/Tilt/Zoom camera (sold separately).

Figure B

DVR Back Panel



1	BNC Video Input	8
2	BNC Video Output	1
3	RCA Audio Input	2
4	RJ45 LAN Ethernet Port	1
5	12VDC Power Input	1

6	RCA Audio Output	1
7	HDMI Video Output	1
8	VGA Video Output	1
9	USB 2.0 Port	2
10	RS485 PTZ Connector	1

Figure C

DVR Accessories

12VDC/2A Power Adapter

BNC to RCA Cable

Remote Control Functions	
1 - 8	Select Channel
0	Lock and Unlock Controls
ALL	Toggle between single, 4 and 8 Screen Displays
MENU	Open Menu
MUTE	Mute
SUBMENU	Open Pop-Up Menu
▲	Menu Up
▼	Menu Down
◄	Menu Left
►	Menu Right
SEL	Confirm Selected Operation
◄◄	Rewind
►	Play / Search Records
►►	Fast Forward
●	Record
II	Pause
■	Stop

Remote

Note: 2 AAA batteries included

Mouse

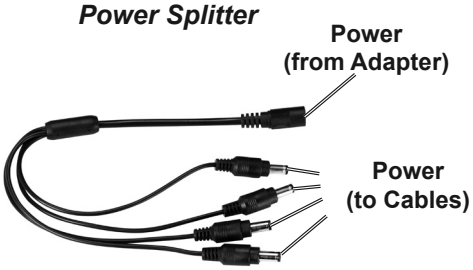
Use the Mouse to navigate the DVR

Figure D

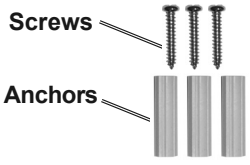
Camera and Accessories

12VDC/1A Power Adapter

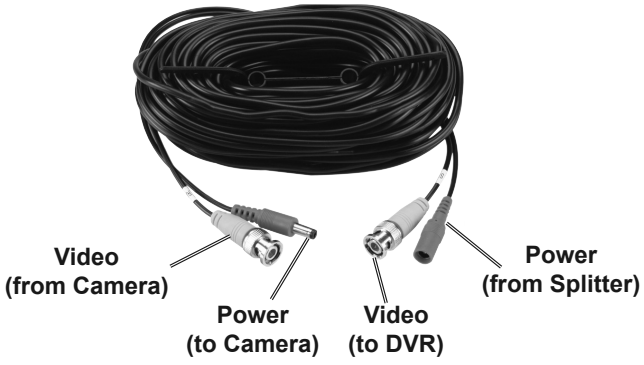
Power Splitter



Mounting Hardware



Cable - 60 ft.



Camera

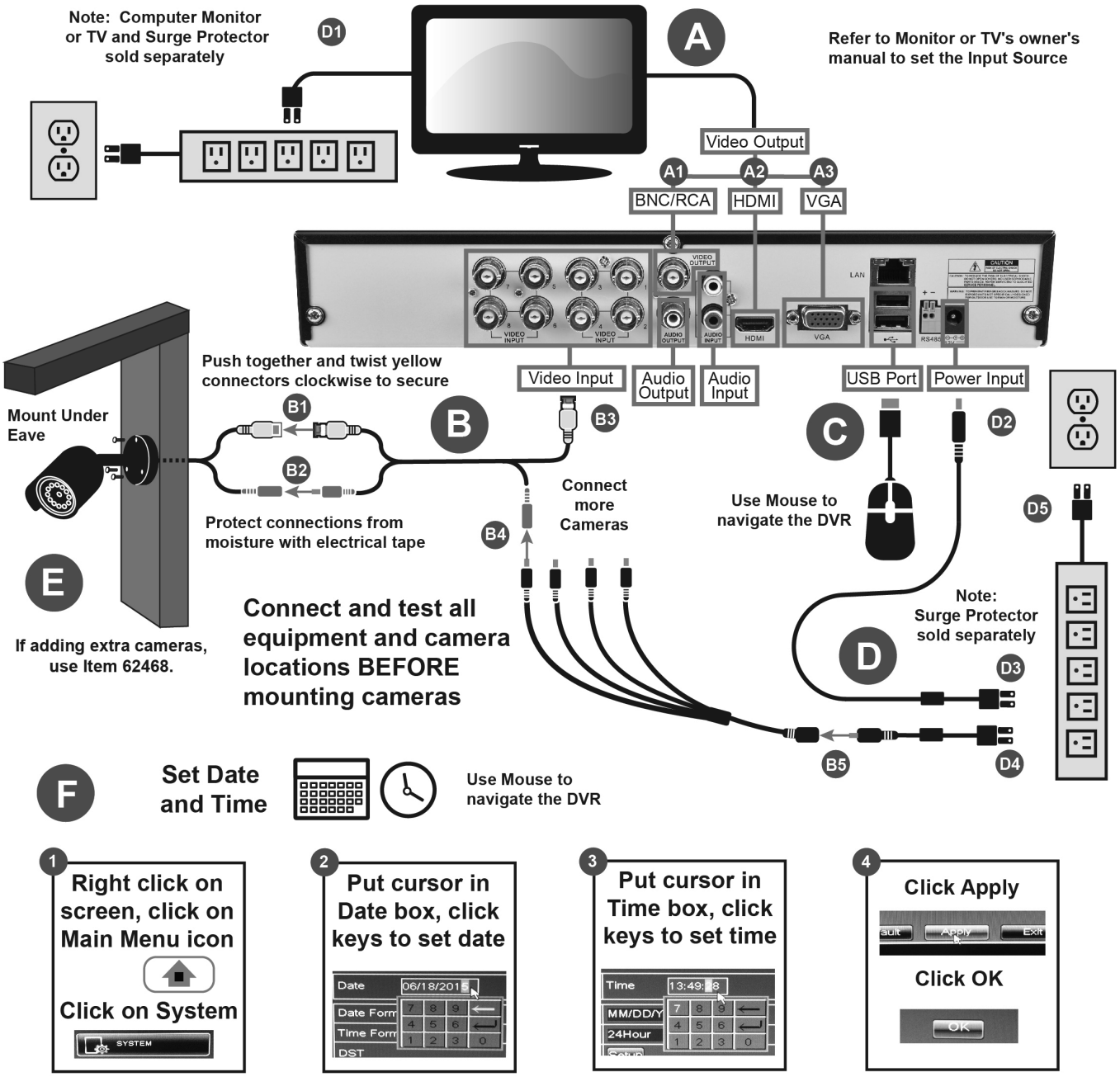
Figure E

Setup

Read the ENTIRE IMPORTANT SAFETY INFORMATION section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

NOTICE: CHECK FEDERAL, STATE AND LOCAL SURVEILLANCE LAWS BEFORE INSTALLING VIDEO AND/OR AUDIO SURVEILLANCE EQUIPMENT.

A Connect Monitor | B Connect Cameras | C Connect Mouse | D Connect Power | E Mount Cameras | F Set Date and Time



1. Right click on screen, click on Main Menu icon. Click on System.
2. Put cursor in Date box, click keys to set date.
3. Put cursor in Time box, click keys to set time.
4. Click Apply. Click OK.

IMPORTANT: If Mouse, Remote, and DVR buttons won't work, press and hold REW button on front of DVR until unit beeps.

CONNECT AND TEST ALL EQUIPMENT AND CAMERA LOCATIONS BEFORE MOUNTING CAMERAS.

Designate Location for DVR and Monitor

When planning location for DVR and Monitor:

1. Choose a clean, dry, well ventilated, dust-free location indoors with a 120V outlet nearby.
2. If setting up Network access, make sure the DVR is located close to a router.
3. Take into consideration the length of the Camera Cables.

CAUTION! Route the Cables so as to avoid a tripping hazard.

4. Make sure location will remain within Operating Temperature.

A. Connect Monitor

Connect monitor or TV (sold separately) to DVR using:

BNC to RCA cable (included), HDMI cable (sold separately) or VGA cable (sold separately).

B. Connect Cameras and Audio

NOTICE: Do not join cables together end-to-end. Video loss may occur. If extra length is needed, longer cables (sold separately) and a higher amperage power adapter (sold separately) should be used.

1. Connect Video (Yellow) from Cameras to Cables.

Note: Route Cables so that the end marked TO CAMERA is at the Camera end.

2. Connect Power (Red) from Cameras to Cables.
3. Connect Video (Yellow) from Cables to DVR.
4. Connect Power from Cables to Splitter.
5. Connect Splitter to Camera Power Adapter.
6. Protect connections from moisture with electrical tape.

7. **Audio:** Connect audio surveillance microphone (sold separately) to Audio Input and speaker (sold separately) to Audio Output.
   - **Go to Record > MainStream - Set Resolution, FPS, Bitrate and Audio on page 17 to enable audio.**
   - **Go to Network > SubStream - Set Resolution, FPS, Bitrate and Audio on page 31 to enable audio during remote access.**

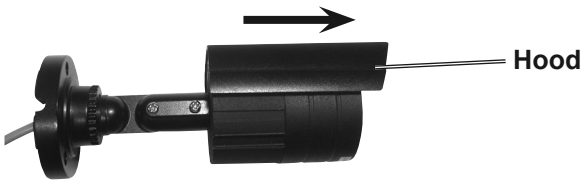
NOTICE: CHECK FEDERAL, STATE AND LOCAL AUDIO SURVEILLANCE LAWS BEFORE INSTALLING MICROPHONE.

Plan Mounting Locations for Cameras

DO NOT MOUNT CAMERAS YET!

Note: If adding extra cameras, use Item 62468.

1. Camera comes with Hood in storage position. Pull Hood out to protect lens.



2. When planning mounting locations and angles:
   a. Take into consideration the length of the Cables.

CAUTION! Route the Cables so as to avoid a tripping hazard.

   b. Choose locations under eaves to shelter Cameras from rain and direct sunlight.
   c. Choose locations high enough so that Cameras are visible, but out of reach.
   d. Verify that installation surfaces have no hidden utility lines before drilling or driving screws.
   e. Make sure no strong light will shine directly into Camera Lenses.
   f. To avoid mounting the Cameras upside down, make sure the Hood is above the Lens.
   g. Do not point Camera through a window, glaring may occur, resulting in poor quality images.

C. Connect Mouse

Plug Mouse into either USB port on back of DVR. The Mouse will be used to navigate the DVR.

D. Connect Power

Note: Connect power using a surge protector (sold separately).

1. Plug Monitor into surge protector.
2. Plug DVR Power Adapter into Power Input on DVR.
3. Plug DVR Power Adapter plug into surge protector.
4. Plug Camera Power Adapter into surge protector.
5. Plug surge protector into 120V outlet.

CAUTION! The Power Adapters MUST be plugged in indoors in a clean, dry location.

6. System will boot up and green PWR (power) light will glow.
7. After boot up, system will initialize.

Note: It may take up to a minute for initialization to complete.

8. After initialization is complete, system will beep, then display Live View.

Live View

Figure F: Live View

Note: R will display on Live View and red HDD light on DVR's front panel will flash to indicate DVR is recording. (**Go to Default Settings on page 12** for a list of what the DVR will automatically do.)

Note: The DVR may beep if disconnecting and reconnecting cameras because video loss will trigger a notification. **Go to Advanced > Events - Notifications on page 14** to change settings.

Double click on image to view in full screen. Double click again to return to previous view.

IMPORTANT: If Mouse, Remote, and DVR buttons won't work, press and hold REW button on front of DVR until unit beeps.

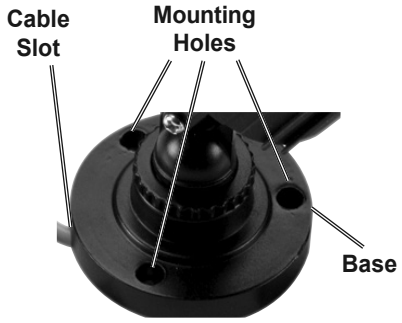
E. Mount Cameras

CONNECT AND TEST ALL EQUIPMENT AND CAMERA LOCATIONS <u>BEFORE</u> MOUNTING CAMERAS.

Place Cameras under eaves and cable connections inside walls to shelter them from rain and direct sunlight.

Using the Base as a template, mark locations of mounting holes on mounting surface.

<u>Note:</u> Route Cable through slot on Base to keep Base flush with mounting surface while marking holes.



Solid Surface

1. Using a drill bit slightly smaller than the Screws, drill pilot holes into the marked locations.
2. Position Camera so that mounting holes align with pilot holes.

<u>Note:</u> Route Cable through slot on Base to keep Base flush with mounting surface.

3. Drive Screws through mounting holes in Base and into pilot holes until the Camera is securely attached to the mounting surface.

Hollow Surface

1. Using a drill bit slightly smaller than the Anchors, drill holes in the marked locations.
2. Tap Anchors into the holes until they are almost flush with mounting surface.
3. Position Camera so that mounting holes align with anchors.

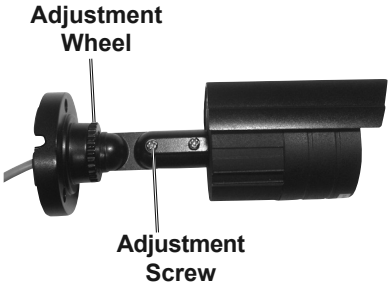
<u>Note:</u> Route Cable through slot on Base to keep Base flush with mounting surface.

4. Drive Screws through mounting holes in Base and into anchors until the Camera is securely attached to the mounting surface.

Camera Adjustment

1. Loosen Adjustment Wheel, rotate Camera as needed, then tighten Adjustment Wheel.
2. Loosen Adjustment Screw, tilt Camera as needed, then tighten Adjustment Screw.

<u>Note:</u> Only loosen Adjustment Screw slightly, do not remove it.



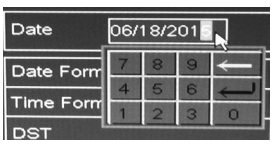
F. Set Date and Time

<u>Note:</u> Use Mouse to navigate the DVR.

1. Right click on screen, click on Main Menu icon.

2. Click on System.

3. Put cursor in Date box, click keys to set date.



4. Put cursor in Time box, click keys to set time.

5. Click Apply.

6. Click OK.

Default Settings

After Date and Time are set, the DVR will automatically perform the following functions.

Default Settings (after setting Date and Time)		To Change Default Settings
Menus	• **Will time out after 1 minute**	• **Go to page 14**
Notification	• **Will beep when camera is unplugged**	• **Go to page 14**
Password	• **Off**	• **Go to page 15**
Recording	• **Date and recording time will be visible on recordings** • **All Channels with a camera hooked up will record 24/7** • **Red HDD light on front panel flashes**	• **Go to page 15** • **Go to page 16** • **Cannot change**
Motion Detection	• **Off**	• **Go to page 16**
Video	• **16:9 Wide Screen aspect ratio** • **WD1 Resolution (960 x 480)** • **11 Frames per Second (FPS)** • **768 Bitrate**	• **Go to page 17**

Pop-Up Menu

To access Pop-Up Menu, right-click anywhere on screen or hover over bottom of screen.

*Controls for PTZ mode are italicized. PTZ is optional Pan/Tilt/Zoom camera (sold separately).

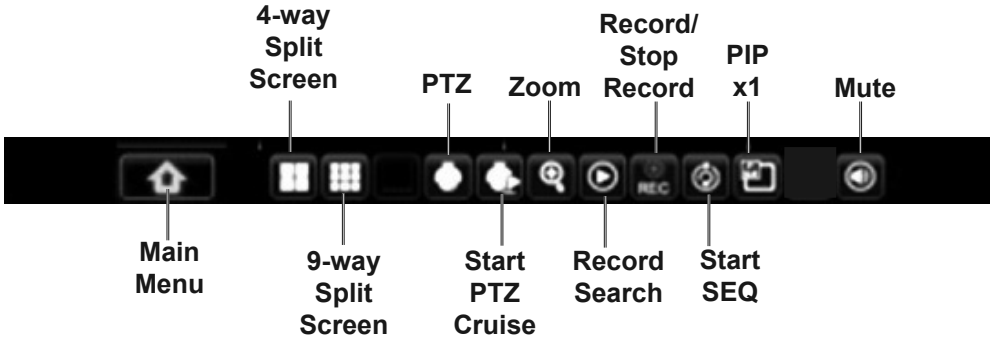


Figure G

Main Menu	Main Menu
4-way Split Screen	Display Up To 4 Live Images
8-way Split Screen	Display Up To 8 Live Images
PTZ	*Go To PTZ Controls**
Start Cruise	*Start PTZ Program**
Zoom	Click and drag to zoom
Record Search	Go To Record Search

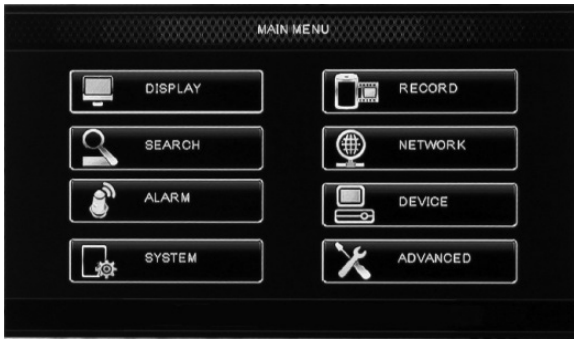
Record/Stop Record	Start Recording/ Stop Recording
Start SEQ/Stop SEQ (Sequence)	Rotate Through Live Images/Stop Rotation
PIPx1	Picture in Picture
Mute	(if audio hooked up)

IMPORTANT: If Mouse, Remote, and DVR buttons won't work, press and hold REW button on front of DVR until unit beeps.

Basic Menu

To access Main Menu, bring up Pop-Up menu and click Main Menu icon

Exit from any menu by right clicking on screen



Basic Settings

SYSTEM	**General** Date, Time, Language, and Menu Settings	p. 14
ADVANCED	**Events** Set up Notifications	p. 14
SYSTEM	**Users** Password Settings	p. 15
DISPLAY	**Live** Monitor Settings	p.15
RECORD	**Schedule** Recording Settings	p. 16
	REC Para Recording Parameters	p. 17
	Main Stream Set Resolution, FPS, Bitrate and Audio	p. 17

Operation

SEARCH	**Event Search** Playback and Backup Recordings	p. 18
	Log View DVR's Activity	p. 19
ADVANCED	**Maintain** Maintain Hard Drive, Update Software & Firmware, Restore Default Settings, Reboot And Shut Down	p. 20
DEVICE	**HDD** Format Hard Drive and USB Flash Drive	p. 20

For Advanced Menu, go to page 21.

Date, Time, Language, and Menu Settings

System > General

Figure H

1. **Date and Time:**
   a. **Date:** Enter current date.
   b. **Time:** Enter current time.
   c. **Date Format: 24Hour** is selected by default. Change to **12Hour** if desired.
   d. **Time Format: MM/DD/YY** is selected by default. Change to other format if desired.
   e. **Click Apply then OK to save date and time settings.**
2. **DST (Daylight Saving Time) Setup**:
   a. Click **Setup**.

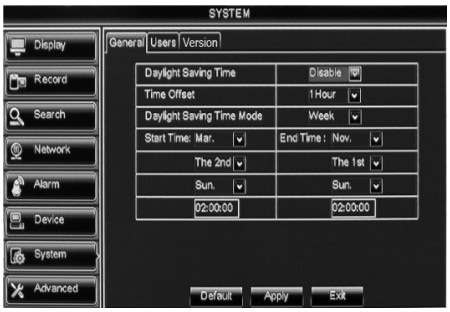


Figure I

   b. **Daylight Saving Time: Disable** is selected by default. Change to **Enable** to manually enter when time change will happen.
   c. **Time Offset: 1Hour** is selected by default. Change to **2Hour** if necessary.
   d. **Daylight Saving Time Mode:**

   Week: Set month, week, day of week and time for change to occur.

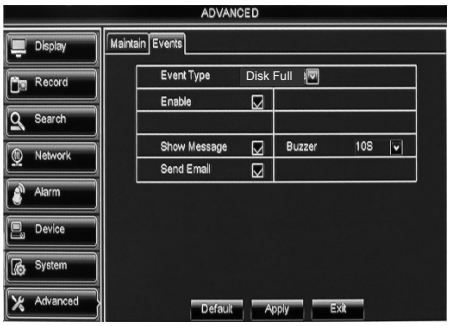
   Date: Set date and time for change to occur.
3. **NTP (Network Time Protocol) Setup:** The DVR must be connected to your Network for this feature to work. **(Go to Time Settings on page 22)**
4. **Language: English** is selected by default. Change if desired.
   - System needs to restart before **Language** changes will apply. Click **Apply** and **OK**, then **Exit**. Right click on screen and DVR will prompt restart. Click **OK**.
5. **Video Format:** Default is **NTSC**, which is the standard in the United States. **LEAVE IT SET TO NTSC**.
6. **Menu Time Out:** Select how long menus will display or set to **OFF** so menus will always display.

Changes will be saved when you click Apply then OK.

Changes will not be saved if you click Exit or right click on screen.

Click Default to restore default settings.

Advanced > Events - Notifications



Note: By default, all events will trigger on screen messages, email being sent (if email is set up) and beeping sound.

Note: To set up email, the DVR must be connected to your Network. (**Go to Network > Email - Set up Email Notifications on page 34**)

1. **Event Type:** Choose Disc Full, Disc Error, or Video Loss.
2. Change settings if desired.

Changes will be saved when you click Apply then OK.

Changes will not be saved if you click Exit or right click on screen.

Click Default to restore default settings.

Password Settings

System > Users - Set Password for main user.
(To add other users, go to User Management Settings on page 22)

1. **admin** is selected by default. Click **Edit** at bottom of screen**.**

Figure J

2. **User Name:** Leave as **admin or** enter another name (up to 8 characters).
3. **Password Enable:** Select **Enable**.
   a. **Password:** Enter Password (must be 6 characters).
   b. **Confirm:** Enter Password again.

Changes will be saved when you click Apply then OK.

Changes will not be saved if you click Exit or right click on screen.

Note: When Password is Enabled, a key icon will appear on Pop-Up Menu.

Figure K

Note: To add other users, **go to User Management Settings on page 22.**

NOTICE: If you are locked out of the DVR because of a password problem, call **1-888-866-5797.**

Monitor Settings

Display > Live - Set camera names, viewing positions, color and information to display on monitor

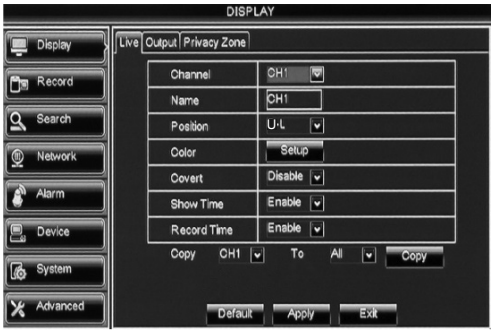


Figure L

1. **Channel**: Select which Channel to set up.
2. **Name**: Enter Channel name (up to 8 characters). For example, "Garage" or "Backyard".
3. **Position:** Select where **Channel Name** will appear on the monitor.
   a. **U-L:** Upper Left
   b. **D-L:** Lower Left.
   c. **U-R:** Upper Right.
   d. **D-R:** Lower Right.
   e. **Disable:** No name will appear.
4. **Color:** Click **Setup** to adjust Hue, Brightness, Contrast, and Saturation.

Changes will be saved when you click Apply > OK > Exit.

Changes will not be saved if you click Exit or right click on screen.

5. **Covert: Disable** is selected by default. Select **Enable** to hide live image on monitor.

Note: Camera will still record even if the image can't be seen on monitor.

6. **Show Time: Enable** is selected by default to show date and time on monitor.
7. **Record Time: Enable** is selected by default to show date and time on recordings.
8. **Copy:** Copy settings from one Channel to other Channels.
   a. Select Channel to copy from.
   b. Select Channel to copy to or select **ALL.**
   c. Click **Copy**, then click **OK.**

Changes will be saved when you click Apply then OK.

Changes will not be saved if you click Exit or right click on screen.

Click Default to restore default settings.

Recording Settings

Record > Schedule - Normal, Motion Detection and Manual Settings

(To set advanced Motion Detection settings, go to Motion Detection Settings on page 23)

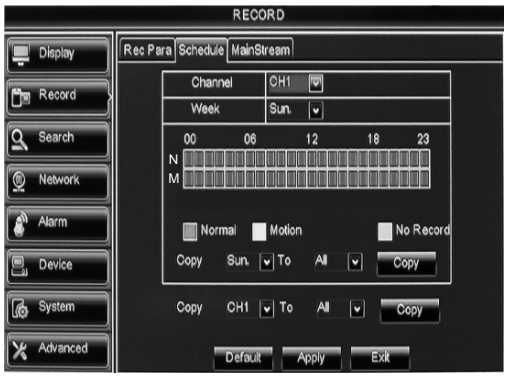
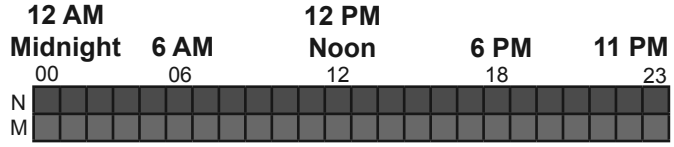


Figure M

1. **Schedule Table:**



Note: Click or click and drag to select or deselect boxes.

2. **N - Normal:**
   - When green boxes are selected, DVR will record during selected time frames and red R will display on Live View.
   - When gray boxes are selected, DVR will not record and red HDD light will stop flashing. If motion is detected, green M will display on Live View, but no recording will be made.

Note: If HDD light continues to flash after selecting gray boxes, press **STOP** on DVR's front panel.

Normal	Schedule Table	
	Green	Gray
Record	X	
Not Record		X

Figure N

3. **M - Motion:** When yellow boxes are selected, DVR will record during selected time frames when a camera detects motion and red M will display on Live View.

Note: To start recording several seconds BEFORE motion is detected, ensure that **Pre-record** is set to **ENABLE** according to **Record > Rec Para - Recording Parameters on page 17, step 3.**

Motion	Schedule Table	
	Green	Yellow
Motion Only		X

Figure O

4. **N & M: Normal with Motion -** When both green and yellow boxes are selected:
   - DVR will record constantly during selected time frames and red R will display on Live View.
   - DVR will record separate event during selected time frames when a camera detects motion and red M will display on Live View.

Note: To start motion event recording several seconds BEFORE motion is detected, ensure that **Pre-record** is set to **ENABLE** according to **Record > Rec Para - Recording Parameters on page 17, step 3.**

Motion	Schedule Table	
	Green	Yellow
Normal with Motion	X	X

5. **Copy (Day of week):** Copy settings from one Day to other Days for this channel only.
   a. Select Day to copy from.
   b. Select Day to copy to or select **ALL.**
   c. Click **Copy**, then click **OK.**
6. **Copy (Channel):** Copy settings from one Channel to other Channels for all the days of the week.
   a. Select Channel to copy from.
   b. Select Channel to copy to or select **ALL.**
   c. Click **Copy**, then click **OK.**

Changes will be saved when you click Apply then OK.

Changes will not be saved if you click Exit or right click on screen.

Note: To set advanced Motion Detection settings, **go to Motion Detection Settings on page 23.**

7. **Manual Recording:**
   a. Click or click and drag all green and yellow boxes until all boxes are gray.
   b. Click **Apply** then **OK**. If HDD light continues to flash, press **STOP** on DVR's front panel.
   c. To record manually:
      - Click REC on Pop-Up Menu,
      - Press **REC●** on DVR's front panel, or
      - Press ● on remote.
   d. To stop recording manually:
      - Click ⏸ on Pop-Up Menu,
      - Press **STOP** on DVR's front panel, or
      - Press ■ on remote.

Recording Settings (continued)

Record > Rec Para - Recording Parameters

Note: All channels are set to record and pre-record by default.

Figure P

1. **Channel:** Select Channel.
2. **Record: Enable** is selected by default to record on all channels. Change if desired.
3. **Pre-record: Enable** is selected by default to start motion event recordings several seconds BEFORE motion is detected.
4. **Copy:** Copy settings from one Channel to other Channels.
   a. Select Channel to copy from.
   b. Select Channel to copy to or select **ALL.**
   c. Click **Copy**, then click **OK.**

Changes will be saved when you click Apply then OK.

Changes will not be saved if you click Exit or right click on screen.

Click Default to restore default settings.

Record > MainStream - Set Resolution, FPS, Bitrate and Audio

Note: The hard drive will fill up faster when the Frames Per Second (FPS) and Bitrate are set higher than default settings. Resolution is set by default to the highest setting.

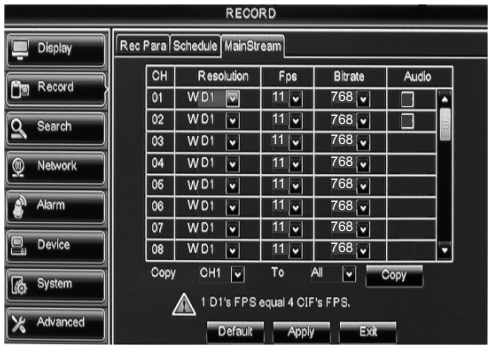


Figure Q

1. **Mode and Resolution:**
   a. Select **Mode 960H** for **16:9 wide screen** view.

   Resolution Choices:
   - **WD1:** 960 x 480 (default)
   - **WHD1:** 960 x 240
   - **WCIF:** 480 x 240

   b. Select **Mode D1** for **4:3 standard screen** view.

   Resolution Choices:
   - **D1:** 720 x 480 (default)
   - **HD1:** 720 x 240
   - **CIF:** 360 x 240

   c. System needs to restart before **Mode** changes will apply. Click **Apply** and **OK**, then **Exit**. Right click on screen and DVR will prompt restart. Click **OK.**
2. **FPS (Frames per second):** Change if desired.

Note: The higher the FPS, the smoother the recording will be.
In **Mode D1 a**ll Channels may be set to the maximum of 30 FPS each**.**
In **Mode 960H** there is an FPS counter that shows total and remaining FPS. You can adjust FPS up and down between cameras to use all of the FPS.

3. **Bitrate (Kbps):** Change if desired.
4. **Audio:** Check box to record audio if audio surveillance microphone (sold separately) is being used.

Note: Audio is available on Channel 1 and Channel 2 only.

5. **Copy:** Copy settings from one Channel to other Channels.
   a. Select Channel to copy from.
   b. Select Channel to copy to or select **ALL.**
   c. Click **Copy**, then click **OK.**

Changes will be saved when you click Apply then OK.

Changes will not be saved if you click Exit or right click on screen.

Click Default to restore default settings.

Playback and Backup Recordings

Search > Event Search

Figure R

1. **Search Date:** Today's date is selected by default. Change date to search a different day.
2. **CH: All** is selected by default. Change if desired.
3. **Search Time:** Default is set to search entire day. To search a different time frame, enter beginning time in first box and ending time in second box.
4. **TYPE:** Select **All**, **Normal**, or **Alarm** recordings.
   a. **Normal** - Scheduled or manual recordings.
   b. **Alarm** - Motion event recordings.
5. Click **Search** to populate table with list of recordings. Use buttons below table to navigate:

   Go to first recording Go to previous page

   Go to next page Go to last recording

6. Click on individual recording to playback.

Figure S

Note: Playback will start automatically.

a. Playback Bar will appear at bottom of screen. Functions are shown below.

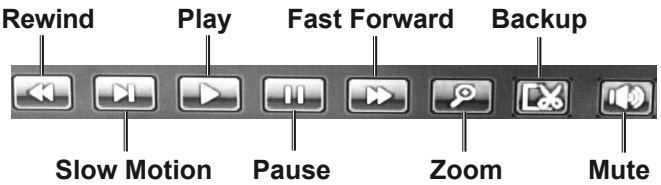


Figure T: Playback Bar

b. **Zoom:** Click then drag a box over area to zoom in on. Right click to exit.

7. **Backup Recordings**

   Insert a USB flash drive into either USB port on back of DVR.

Note: Some flash drives include special file handling software and may not be compatible.

Backup Segment During Playback:

- While viewing a recording, click once, then click and drag the **Time Marker** from beginning to end of desired time segment to backup.

Figure U

- Click again to bring up **BACKUP CONFIRM** box.

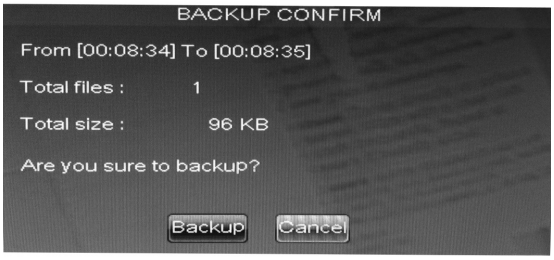
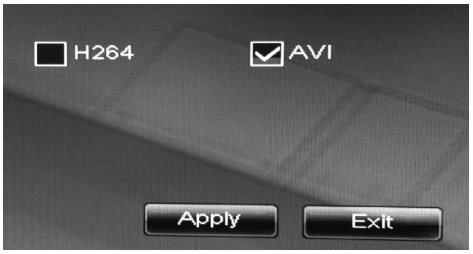


Figure V

- Click **Backup** to save the file to the flash drive.



- You will be prompted to choose between **H264** and **AVI** file. **AVI** should be chosen in most cases.

Note: **AVI** is a common media file and will work with most computer's media players. **H264** is an uncommon media file.

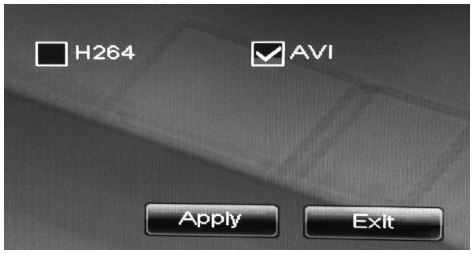
- Click **Apply** and wait until **Backup Completed** box pops up, then click **OK.**
- The USB flash drive can be plugged into another device to view or transfer recordings.

Backup Entire Recording:

- Follow steps 1 to 5 on page 18.
- To select recordings for backup, click in **BAK** box for each selection.

Figure W

- To select all recordings for backup, click **All.** To deselect all recordings, click **Inverse.**
- Click **Backup.**



- You will be prompted to choose between **H264** and **AVI** file. **AVI** should be chosen in most cases.

Note: **AVI** is a common media file and will work with most computer's media players. **H264** is an uncommon media file.

- Click **Apply** and wait until **Backup Completed** box pops up, then click **OK.**
- The USB flash drive can be plugged into another device to view or transfer recordings.

View DVR's Activity

Search > Log

Figure X

1. **Start Time (Date):** Today's date is selected by default. Change date to search a different day.
2. **End Time (Date):** Today's date is selected by default. Change date to search a different day.
3. **Log Type:** All is selected by default. Change to search for specific type:
   a. **System -** Logs when DVR starts up, shuts down, reboots or time settings are changed.
   b. **Config** - Logs when settings are changed.
   c. **Alarm -** Logs when motion events start and end; and when there is video loss.
   d. **Account -** Logs when users login and logout.
   e. **Record -** Logs when manual recordings start and stop; and when records are searched, played back and backed up.
   f. **Storage -** Logs when the hard drive has been formatted.
4. Click **Search** to populate table with list of log entries. Use buttons below table to navigate:

   Go to first log Go to previous page

   Go to next page Go to last log.
5. Double-click any log entry for more details.
6. **Backup Log**

   Insert a USB flash drive into either USB port on back of DVR.

Note: Some flash drives include special file handling software and may not be compatible.

- Click **Backup** to backup log file, then click **OK** when backup finished.
- The USB flash drive can be plugged into another device to view or transfer log file(s).

Maintain Hard Drive

Advanced > Maintain - Set up Reboot Cycle, Update Software & Firmware, Restore Default Settings, Reboot And Shut Down

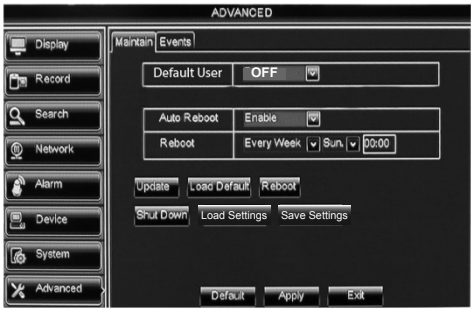


Figure Y

1. **Default User:**
   a. **OFF** is selected by default so that any user can access this function.
   b. Select **Admin** so that only the main user can access this function.
2. **Auto Reboot: Enable** is selected by default.
3. **Reboot:** By default DVR will Reboot every Sunday at midnight. To change:
   a. Select when to **Auto Reboot.**
   - **Everyday**
   - **Every Week**
   - **Every Month**

   b. Enter time according to which time format you are using. For example, to auto reboot at 9:00 PM:
   - 24 Hour = 21:00
   - 12 Hour = 09:00 PM

4. **Update:** For updating firmware using a USB flash drive. **(Find the most recent firmware updates at harborfreight.com.)**
5. **Load Default:**
   a. Click to restore system default settings.
   b. Check the settings to restore, click **APPLY** then **OK.**

IMPORTANT! Clicking **OK** will delete custom settings you have made.

   c. System needs to restart before changes will apply. Click **Apply** and **OK**, then **Exit**. Right click on screen and DVR will prompt restart. Click **OK**.

6. **Reboot:** Click to manually reboot system.
7. **Shut Down:** Click to manually shut down system. Unplug DVR and plug back in to restart.
8. **Load Settings:** Import settings using a USB flash drive.
9. **Save Settings:** Export settings using a USB flash drive.

Changes will be saved when you click Apply then OK.

Changes will not be saved if you click Exit or right click on screen.

Format Hard Drive and USB Flash Drive

Device > HDD

Figure Z

No.	ID number of drives
State	**OK -** Hard drive installed
	No HDD - No hard drive installed
Free/total	Free Space/Total Space
Free Time	Recording time available

Figure AA

1. **Overwrite: Auto** is selected by default. The Hard Disk Drive will overwrite itself when full. Change if desired.
2. **Format Hard Drive:**
   a. Click **Select** box.
   b. Click **Format HDD.**
   c. Click **OK.**
   d. When formatting is finished, click **OK.**
3. **Format USB Flash Drive:**
   a. Install USB flash drive into back of DVR.
   b. Click **Format USB.**
   c. Click **OK.**
   d. When formatting is finished, click **OK.**

Changes will be saved when you click Apply then OK.

Changes will not be saved if you click Exit or right click on screen.

DISPLAY	**Output -** Monitor Settings	p. 21
SYSTEM	**General -** Clock Settings	p. 22
	Users - Set up Users	p. 22
DISPLAY	**Privacy Zone -** Block areas from Live View	p. 23
ALARM	**Motion** - Motion Detection Settings	p.23
DEVICE	**PTZ -** Set up PTZ Camera	p.24
SYSTEM	**Info -** Device Information & Software Versions	p. 24

Monitor Settings

Display > Output

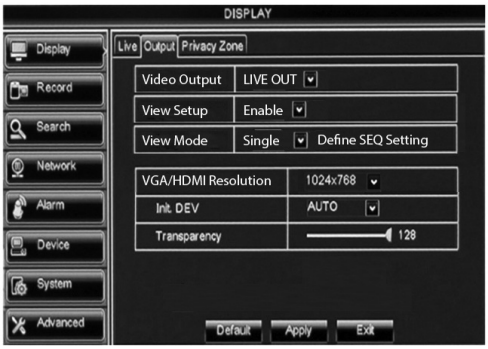


Figure AB

1. **Video Output:** Cannot modify.
2. **View Setup: Disable** is set by default. Choose **Enable** to modify **View Mode.**
3. **SEQ (Sequence) Time:** Amount of time, in seconds, that each Channel will display in Live View when **Start SEQ** is activated from the Pop-Up Menu.
4. **VGA/HDMI Resolution:** Select resolution for monitor or TV (see monitor's or TV's user manual).
5. **Init. DEV:** Sets output. **Auto** is set as default.
6. **Transparency:** Set transparency of Menus.

Changes will be saved when you click Apply then OK.

Changes will not be saved if you click Exit or right click on screen.

Clock Settings

System > General - NTP (Network Time Protocol)

1. The DVR must be connected to your network for this feature to work. **(Go to Connect DVR to Network on page 28)**

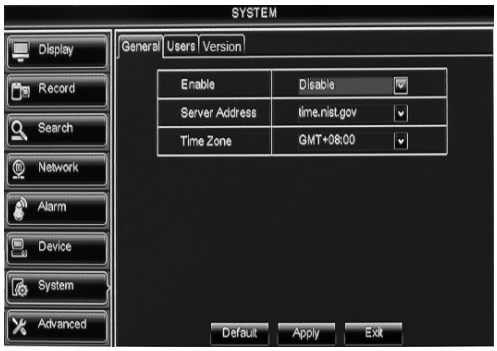


Figure AC

2. After network connection is set up:
   a. Click NTP **Setup.**
   b. Select **Enable.**
   c. Choose **Server Address.**
   d. Choose **Time Zone.**
   e. Click **Apply** then **OK.**
   f. Click **Update Now**.

The DVR's clock will be synchronized to Coordinated Universal Time (UTC).

Changes will be saved when you click Apply then OK.

Changes will not be saved if you click Exit or right click on screen.

User Management Settings

System > Users - Set up additional users' passwords and permissions. To set password for main user, go to Password Settings on page 15.

Figure AD

Set up Additional Users

1. Click **SEL.** box (√) for **user1** then click **Edit.** (Another screen will pop up.)
1. **User Enable:** Select **Enable.**
2. **User Name:** Enter User Name (up to 8 characters).
3. **Password Enable:** Select **Enable** or **Disable**.
   a. **Password:** Enter Password (up to 6 characters).
   b. **Confirm:** Enter Password again to confirm.

Changes will be saved when you click Apply then OK.

Changes will not be saved if you click Exit or right click on screen.

4. Select User that was just named and click **Permission.**
   a. Click in boxes to select specific permissions.
   b. Click **All** to select all permissions.
   c. Click **Clear** to remove all permissions.

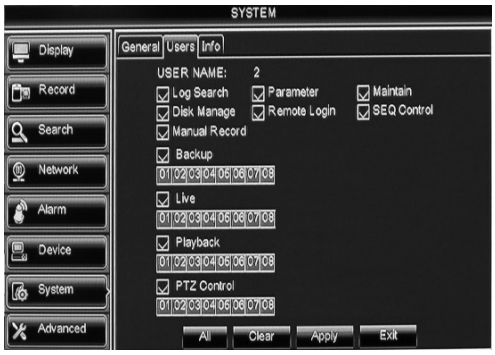


Figure AE

Changes will be saved when you click Apply then OK.

Changes will not be saved if you click Exit or right click on screen.

5. Repeat steps above for other users.

Privacy Zone

Display > Privacy Zone - Block areas from being viewed or recorded

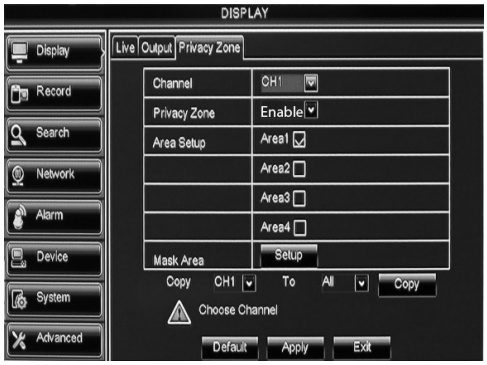


Figure AF

1. **Channel:** Select Channel.
2. **Privacy Zone:** Select **Enable.**
3. **Area Setup:** Select up to 4 areas to block.
4. **Mask Area:** Select **Setup,** you will see green outlined square(s). They can be moved and resized, by clicking and dragging, to cover areas to be blocked.
5. Right click anywhere to return to **Privacy Zone**. Click **Apply** then **OK** to save changes.
6. Repeat steps above for other Channels.
7. **Copy:** Copy settings from one Channel to other Channels.
   a. Select Channel to copy from.
   b. Select Channel to copy to or select **ALL.**
   c. Click **Copy**, then click **OK.**

Changes will be saved when you click Apply then OK.

Changes will not be saved if you click Exit or right click on screen.

Motion Detection Settings

Alarm > Motion

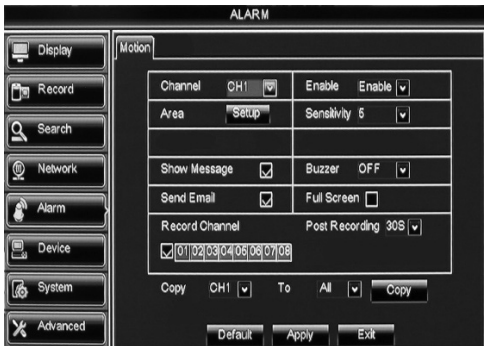


Figure AG

1. **Channel:** Select Camera.
2. **Enable: Enable** is set by default so that when motion detection is scheduled, the selected camera will record. **(Go to Recording Settings on page 16 to schedule motion detection)**
3. **Area:** Click and drag green outlined boxes to set desired area(s) where motion detection will trigger an event. Right click to exit.

Note: If no areas are set, the entire camera view will trigger an event.

4. **Sensitivity:** Set sensitivity level, 1 is lowest and 10 is highest.
5. **Show Message:** Set to **ON** by default. When motion is detected by a camera, M will appear on Live View for that camera.
6. **Buzzer:** Set to **OFF** by default. To turn on, click drop-down box and choose length of time for beeping to sound.
7. **Send Email:** Set to **ON** by default. The DVR must be connected to your Network for this feature to work. **(Go to Network > Email - Set up Email Notifications on page 34)**
8. **Full Screen:** Check box so that when motion is detected by the selected camera, Live View will display in full screen mode for that camera.
9. **Record Channel:** By default, when selected camera detects motion, that camera will record. This setting allows you to choose which other cameras will record when the selected camera detects motion. For example, if you want motion detection for camera 1 to also record from cameras 3 and 4, make the following settings:

10. **Post Recording:** Select how long recording will continue after motion is detected.
11. **Copy:** Copy settings from one Channel to other Channels.
    a. Select Channel to copy from.
    b. Select Channel to copy to or select **ALL.**
    c. Click **Copy**, then click **OK.**

Changes will be saved when you click Apply then OK.

Changes will not be saved if you click Exit or right click on screen.

PTZ Camera

Device > PTZ Settings for PTZ (Pan, Tilt, Zoom) camera (sold separately).

Input information according to PTZ camera manufacturer instructions.

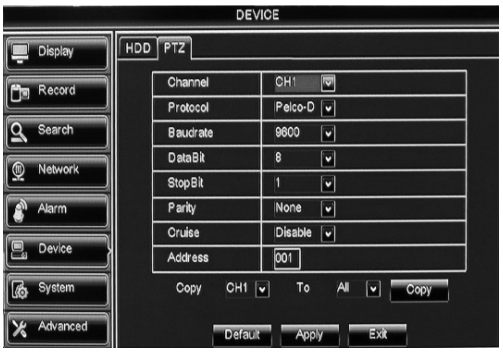


Figure AH

System Information

System > Info

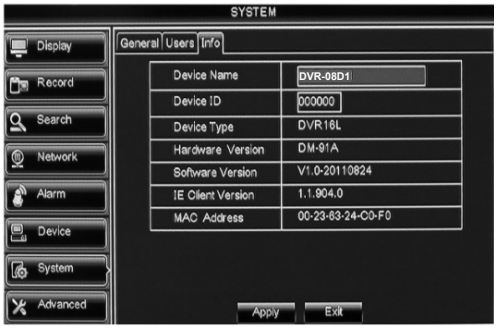


Figure AI

1. **Device Name:** Set to DVR-08D1 by default. Change if desired (up to 21 characters).
2. **Device ID:** Set to 000000 by default. Change if desired (up to 6 numbers).
3. The rest of settings are informational and cannot be changed.

Changes will be saved when you click Apply then OK.

Changes will not be saved if you click Exit or right click on screen.

Bunker Hill Security®

Procedures not specifically explained in this manual must be performed only by a qualified technician.

DVR Maintenance

⚠WARNING

TO PREVENT SERIOUS INJURY FROM ELECTRIC SHOCK:
Shut down the DVR and unplug the Power Adapter from its electrical outlet before inspection, maintenance, or cleaning.

1. **PERIODICALLY,** inspect the general condition of the DVR. Check for:
   - loose hardware,
   - damaged cord/electrical wiring,
   - cracked or broken parts, and
   - any other condition that may affect its safe operation.
2. **PERIODICALLY,** wipe external surfaces of DVR with clean cloth.
3. **ONCE A MONTH,** blow compressed air into vents to remove dust buildup.

Camera Maintenance

⚠WARNING

TO PREVENT SERIOUS INJURY FROM ELECTRIC SHOCK:
Unplug the Power Adapter from its electrical outlet before inspection, maintenance, or cleaning.

1. **PERIODICALLY,** inspect the general condition of the Camera. Check for:
   - loose hardware,
   - damaged cord/electrical wiring,
   - cracked or broken parts, and
   - any other condition that may affect its safe operation.
2. **PERIODICALLY:**
   - Wipe external surfaces of Camera with clean cloth.
   - Clean Camera lenses by applying lens cleaning solution to scratch-free cloth, then wiping lens. **Do not apply solution directly to lens.**
3. Maintain area surrounding Camera, making sure obstacles don't interfere with visibility, such as overgrown bushes.

Bunker Hill Security®

Troubleshooting

Problem	Possible Causes	Likely Solutions
DVR makes beeping sound	1. Camera is unplugged. 2. Hard drive is full. 3. Hard drive is damaged.	1. Check Camera connection at DVR and at Camera. 2. **Go to Device > HDD on page 20** and set Overwrite to Auto. 3. Have a qualified technician repair DVR.
No image(s) in Live View	1. Covert is enabled. 2. Loose or incorrect connections. 3. Longer cables used without sufficient amperage from power adapter. 4. Monitor needs adjustment.	1. **Go to Monitor Settings on page 15** and disable Covert. 2. Check that all connections are secure and in the correct locations. 3. Use power adapter with proper amperage rating. 4. Adjust the image settings on the monitor.
DVR freezes	Hard Drive crash.	Unplug DVR, wait 30 seconds, then plug back in.
Remote won't work	1. Batteries need replacing. 2. Controls are locked.	1. Replace batteries. 2. Press and hold **REW** button on front of DVR until unit beeps or press **0** button on Remote Control to unlock controls.
Mouse won't work	Controls are locked.	Press and hold **REW** button on front of DVR until unit beeps or press **0** button on Remote Control to unlock controls.
DVR buttons won't work	Controls are locked.	Press and hold **REW** button on front of DVR until unit beeps or press **0** button on Remote Control to unlock controls.
Password Problem	Forgot Password	Call 1-888-866-5797
Error codes when trying to install software	1. Interference from antivirus or firewall programs. 2. Incompatibility with Operating System.	1. Follow antivirus or firewall program's instructions to resolve interference. 2. Check System Requirements on page 27 to make sure your Operating System is supported.

Record Product's Serial Number Here:_____

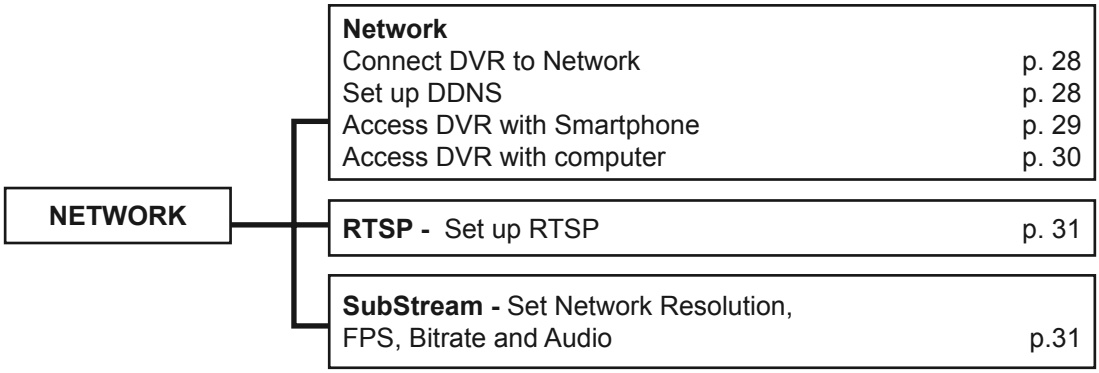
Note: If product has no serial number, record month and year of purchase instead.

Note: Some parts are listed and shown for illustration purposes only, and are not available individually as replacement parts.

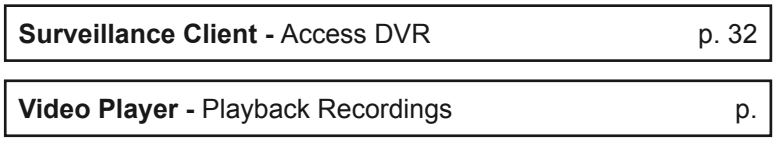
Advanced Network Configuration, Software and Notification Settings

DISCLAIMER: The following pages contain instructions for using a specific equipment setup. Your equipment setup may be different, therefore we cannot offer any more instruction than is contained in the following pages. If you cannot achieve network configuration with these instructions, you will need to contact your Router Manufacturer or Internet Service Provider. You may also need to hire an IT Specialist.

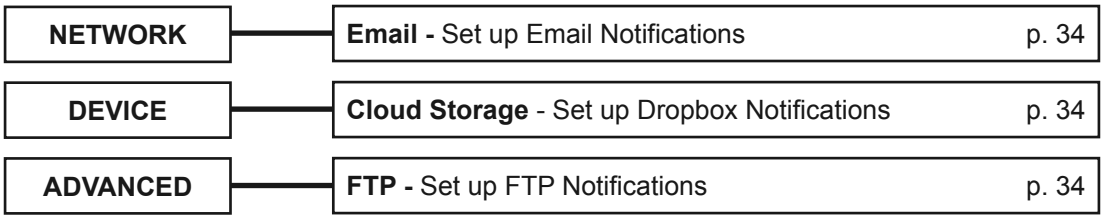
Computer and Smartphone Access


NETWORK
Network
Connect DVR to Network p. 28
Set up DDNS p. 28
Access DVR with Smartphone p. 29
Access DVR with computer p. 30
RTSP - Set up RTSP p. 31
SubStream - Set Network Resolution, FPS, Bitrate and Audio p.31

Software



Notifications


NETWORK
Email - Set up Email Notifications p. 34
DEVICE
Cloud Storage - Set up Dropbox Notifications p. 34
ADVANCED
FTP - Set up FTP Notifications p. 34

Computer and Smartphone Access

Read the <u>ENTIRE</u> IMPORTANT SAFETY INFORMATION section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

<u>IMPORTANT!</u> ***YOU MAY NEED TO HIRE AN IT SPECIALIST TO SET UP THE FUNCTIONS IN THIS SECTION.***

Network > Network

YOU MUST HAVE HIGH SPEED INTERNET, A ROUTER AND AN ETHERNET CABLE (SOLD SEPARATELY). YOU MAY NEED TO CONTACT YOUR ROUTER'S MANUFACTURER OR INTERNET SERVICE PROVIDER.

Connect DVR to Network

Use the chart below to record the information you will need in the following instructions.

Static IP Address or DDNS Host Name (External)	
IP(v4) Address (Internal)	
Subnet Mask	
Default Gateway or Router	

Figure AJ

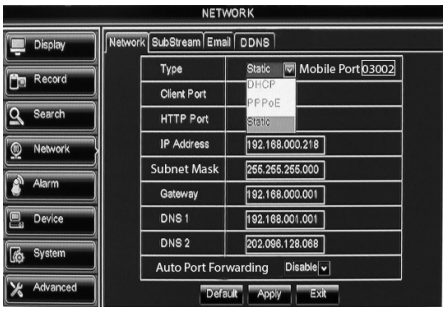


Figure AK

1. Set up user name and password according to **Password Settings on page 15.**
2. Connect DVR to Router via Ethernet Cable (sold separately).

<u>Note:</u> If you are not familiar with your router, contact your Router's Manufacturer or Internet Service Provider.

3. Find out if you have a Static or Dynamic external IP Address.
   a. If Static, get external IP address (It can usually be found on the router's WAN settings page, but your router may differ), fill in the chart, then **go to step 4.**
   b. If Dynamic, set up DDNS Service.

Set up DDNS

- Go to **Network > DDNS**
- **DDNS:** Set to **Enable.**
- **Server:** Sign up online with one of the services on the drop-down list.
- Follow instructions on DDNS service's website to finish setup.
- Click **DDNS Test** button to check the connection.
- Fill in the chart with **DDNS Host Name.**

Changes will be saved when you click Apply then OK.

Changes will not be saved if you click Exit or right click on screen.

Click Default to restore default settings.

4. View Network information:
   a. On **PC:**
      - Click on Start menu, then click Run.
      - Type **"cmd"** then click **OK**.

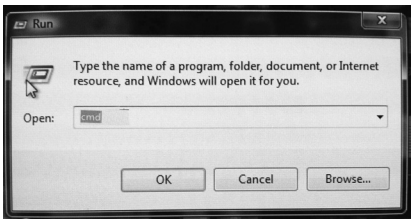


Figure AL

      - Type **"ipconfig"** then press **Enter.**

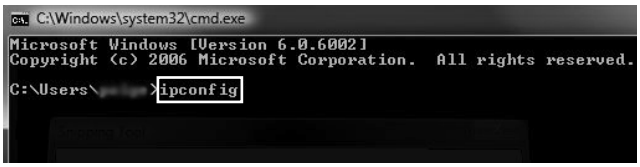


Figure AM: cmd

      - You will see the router's Local Area Connection.

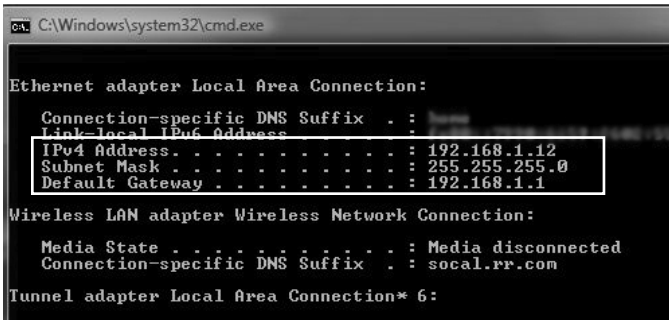

C:\Windows\system32\cmd.exe
Ethernet adapter Local Area Connection:
Connection-specific DNS Suffix . :
IPv4 Address. . . . . : 192.168.1.12
Subnet Mask . . . . . : 255.255.255.0
Default Gateway . . . . . : 192.168.1.1
Wireless LAN adapter Wireless Network Connection:
Media State . . . . . : Media disconnected
Connection-specific DNS Suffix . : socal.rr.com
Tunnel adapter Local Area Connection* 6:

FIGURE AN: IPCONFIG

   b. On **MAC:**
      - Click on .
      - Go to **System Preferences.**
      - Click on **Network.**

5. Fill in the Chart with information from **ipconfig (PC)** or **Network (MAC).**

Note: If any address has single digit sets (Example, 192.168.**1.12**), change to triple digits (Example, 192.168.**001.012**).

IP(v4) Address	*192.168.001.012*
Subnet Mask	*255.255.255.000*
Default Gateway or Router	*192.168.001.001*

Example

6. **On DVR,** go to **Network > Network**:
   a. Leave **Type** set to **Static**.
   b. Set **Client Port** to **03000.**
   c. Set **HTTP Port** to **03001.**
   d. Set **IP(v4) Address** to one from Chart, **change last 3 digits to 200.**

IP(v4) Address	*192.168.001.~~012~~ 200*

Example

   e. Set **Subnet Mask** and **Gateway** to ones from Chart.
   f. Set **DNS1** to the same as **Gateway.**
   g. Enable **Auto Port Forwarding.**
   h. Click **Apply** and **OK**, then **Exit**.
   i. **Right click** on screen and DVR will prompt restart. Click **OK.**

Access DVR with Smartphone

IMPORTANT: Set up network access first according to **Connect DVR to Network on page 28.** Keep the Ethernet Cable connected to the DVR at all times.

1. Using your phone's QR code scanning app, scan the code for your Smartphone's operating system:
   a. **IOS** will open ITunes app store to RXCamLink.
   b. **ANDROID** will open Google Play app store to RXCamLink.
2. Install and open RXCamLink app.
3. Go To Device Manager and click + to add DVR.
4. Give DVR any **Device Name.**
5. Set **Login Type** to **IP/DOMAIN.**
6. Click into Address box to the right of QR Code and type in **Static IP Address or DDNS Host Name** from chart.
7. Set **Client Port** to 3000.
8. Enter **User Name** and **Password** for DVR.
9. Click **Save** and you will see cameras in **Live View.**

IOS

ANDROID

Access DVR with computer

IMPORTANT: Set up network access first according to **Connect DVR to Network on page 28.** Keep the Ethernet Cable connected to the DVR at all times.

1. Install **Surveillance Client. (Go to page 32),** or
2. Use the Internet:

Note: Internet Explorer® is the preferred browser.

a. Open Internet Explorer.

b. Type **Static IP Address or DDNS Host Name** and **HTTP Port** into address bar (NOT search bar) and press ENTER. **Example, http://xxx.xxx.xxx.xxx:3001.**

c. Allow ActiveX control to install.

Note: If Internet Explorer will not allow ActiveX to install change **Download unsigned ActiveX controls** to **Prompt.**

d. Repeat **Step b,** then allow ActiveX Control to install.

e. Login to DVR:

- Enter **User Name** and **Password** for DVR.
- Set **Client Por**t to 3000.
- Choose **Sub stream** for **Bitrate.**

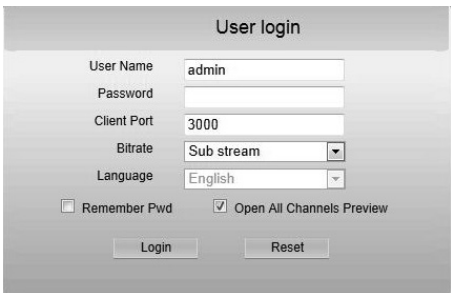


Figure AO

f. Click **Login** and you will see cameras in **Live View.**

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Network > RTSP

Access DVR using VLC Media Player with RTSP (Real Time Streaming Protocol).

Note: Set up this function only if you have advanced networking skill.

Changes will be saved when you click Apply then OK.

Changes will not be saved if you click Exit or right click on screen.

Click Default to restore default settings.

Network > SubStream - Set Resolution, FPS, Bitrate and Audio

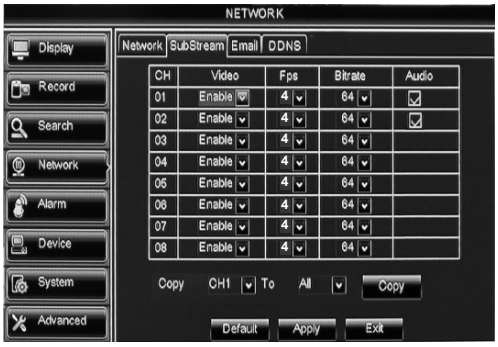

Figure AP

1. **Video: Enable** is set as default.
2. **FPS (Frames per second):** Change if desired.
3. **Bitrate (Kbps):** Change if desired.
4. **Audio -** Check box to record audio if audio surveillance microphone (sold separately) is hooked up. **(To hook up audio equipment, go to B. Connect Cameras and Audio on page 9)**

Note: Audio is available on Channel 1 and Channel 2 only.

5. **Copy:** Copy settings from one Channel to other Channels.
   a. Select Channel to copy from.
   b. Select Channel to copy to or select **ALL.**
   c. Click **Copy**, then click **OK.**

Changes will be saved when you click Apply then OK.

Changes will not be saved if you click Exit or right click on screen.

Click Default to restore default settings.

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Software

Read the ENTIRE IMPORTANT SAFETY INFORMATION section at the beginning of this manual including all text under subheadings therein before set up or use of this product.

IMPORTANT: Set up Network access first according to **Connect DVR to Network on page 28.** Keep the Ethernet Cable connected to the DVR at all times.

System Requirements	
CPU	Intel Pentium 4 or higher, 3GHz
RAM	Min. 2GB
Operating System	Windows XP Professional®, Windows Vista®, Windows 7®, Windows 8®, Windows 10®
Disk Space	Min. 10GB

Surveillance Client

Note: Some antivirus programs or firewalls may prevent full installation.

1. Insert Software CD into computer.
2. Open **Software for PC or Software for Mac** folder.
3. Open **Surveillance client** folder.
4. Install **Surveillance Client.**
5. A wizard will open, click Next.
6. Click **Add Device.**

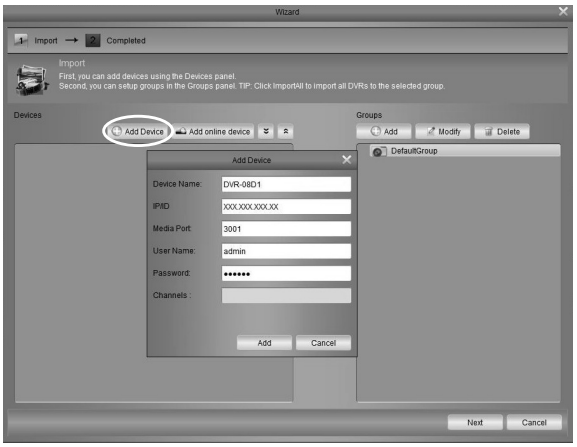


Figure AQ

7. Fill in **Device Name:** Find **Device Name** on DVR in **System>Info.** For inputting numbers, use regular keyboard numbers, NOT keypad.

8. Use **Static IP Address or DDNS Host Name** for **IP/ID.**
9. Change **Media Port** to 3000.
10. Enter **User Name** and **Password** for DVR.
11. Click **Add,** then click **Import All.** Your DVR and all Channels will be visible.

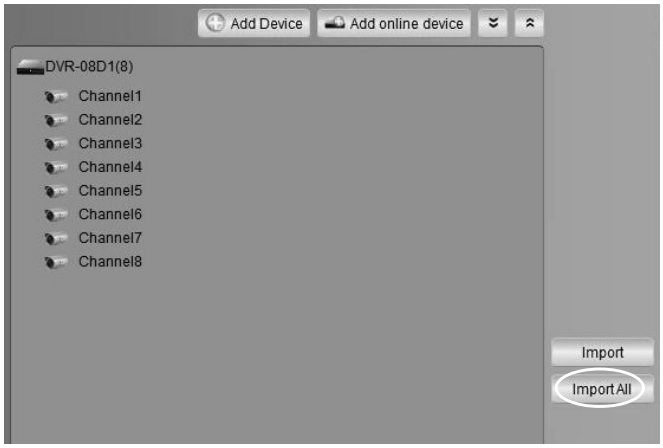


Figure AR

12. Go to **Main View.**
13. Open the Channels by double-clicking **Default Group,** then double-clicking **DVR.**
14. Double-click each Channel to see cameras in **Live View.**

15. Consult **PC Surveillance Client Instructions** for further instructions.

Video Player

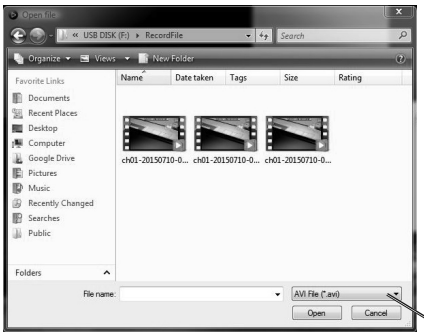
Playback H.264 or AVI files and save .bmp snapshots on a computer.

Note: Some antivirus programs or firewalls may prevent full installation.

1. Insert Software CD into computer.
2. Open **Software for PC** or **Software for Mac** folder.
3. Open **Video player** folder.
4. Install and open **PC Video Player.**
5. Click **Open file.**

Figure AS

6. Choose file type.
7. Find recordings saved on USB flash drive, select them, then click **Open.**



Choose File Type

Figure AT

8. Recordings will show on **File list.**
   - **Full Screen -** Click for full screen, Press **Esc** button to return to normal view.
   - **Advanced Config -** Advanced configurations.
   - **Watermark -** The word “Watermark” will appear on recordings. Click to remove watermark from recordings.
   - Snapshot **-** Saves .bmp image to **VideoPlayer Picture** folder.
   - **Open and close List** - Show or hide **File list.**

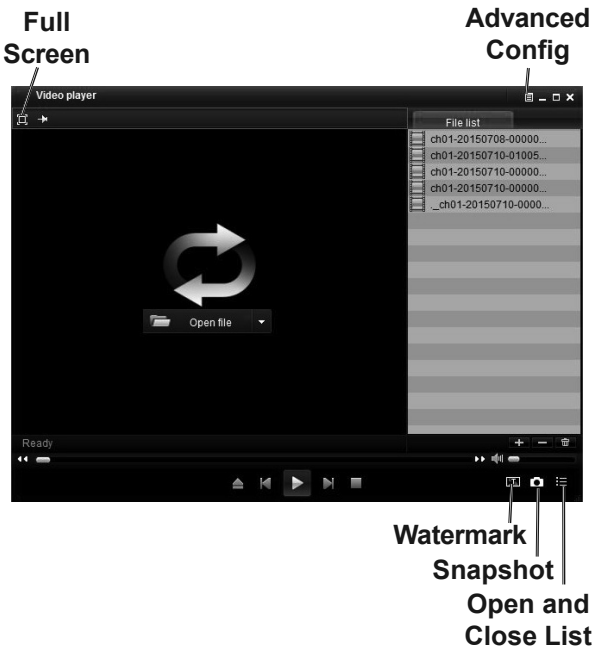


Figure AU

9. Double click on recording to start playback.
10. Click **Snapshot** to save a .bmp image.

Note: You may have to search for ***.bmp** to find the **VideoPlayer Picture** folder.

Notifications

IMPORTANT! ***YOU MAY NEED TO HIRE AN IT SPECIALIST TO SET UP THE FUNCTIONS IN THIS SECTION.***

Network > Email - Set up Email Notifications

IMPORTANT: Set up Network access first according to **Connect DVR to Network on page 28.** Keep the Ethernet Cable connected to the DVR at all times.

Note: If you are not familiar with your email settings, contact your Email Provider.

1. Make sure **Send E-Mail** is checked in **Alarm > Motion on page 23.**
2. **E-Mail:** Set to **Enable.**
3. Enter email settings.
4. Click **Schedule.**

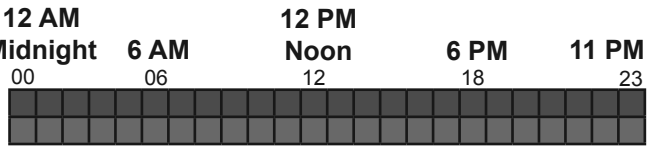


Figure AV: Default Settings

Note: Default settings will send email alerts 24/7 for both Motion events (green boxes) and DVR events (red boxes) for Video Loss, Hard Drive Full or Hard Drive Error.

5. Change settings if desired.

Changes will be saved when you click Apply then OK.

Changes will not be saved if you click Exit or right click on screen.

Click Default to restore default settings.

Device > Cloud Storage - Set up Cloud Notifications

IMPORTANT: Set up Network access first according to **Connect DVR to Network on page 28.** Keep the Ethernet Cable connected to the DVR at all times.

Note: You will need a Dropbox account and be familiar with the Cloud to set up this feature.

1. **Cloud Storage:** Set to **Enable.**
2. Enter appropriate information.

Changes will be saved when you click Apply then OK.

Changes will not be saved if you click Exit or right click on screen.

Click Default to restore default settings.

Advanced > FTP - Set up FTP Notifications

IMPORTANT: Set up Network access first according to **Connect DVR to Network on page 28.** Keep the Ethernet Cable connected to the DVR at all times.

Note: You will need to have an FTP site to set up this feature.

1. **Enable:** Set to **Enable.**
2. Enter appropriate information.

Changes will be saved when you click Apply then OK.

Changes will not be saved if you click Exit or right click on screen.

Click Default to restore default settings.

FCC STATEMENT

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Bunker Hill Security®

Limited 90 Day Warranty

Harbor Freight Tools Co. makes every effort to assure that its products meet high quality and durability standards, and warrants to the original purchaser that this product is free from defects in materials and workmanship for the period of 90 days from the date of purchase. This warranty does not apply to damage due directly or indirectly, to misuse, abuse, negligence or accidents, repairs or alterations outside our facilities, criminal activity, improper installation, normal wear and tear, or to lack of maintenance. We shall in no event be liable for death, injuries to persons or property, or for incidental, contingent, special or consequential damages arising from the use of our product. To the extent that this product is used with software other than what is provided, we shall in no event be liable for any damage to your computer or loss of data. Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation of exclusion may not apply to you. THIS WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS.

To take advantage of this warranty, the product or part must be returned to us with transportation charges prepaid. Proof of purchase date and an explanation of the complaint must accompany the merchandise. If our inspection verifies the defect, we will either repair or replace the product at our election or we may elect to refund the purchase price if we cannot readily and quickly provide you with a replacement. We will return repaired products at our expense, but if we determine there is no defect, or that the defect resulted from causes not within the scope of our warranty, then you must bear the cost of returning the product.

This warranty gives you specific legal rights and you may also have other rights which vary from state to state.

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